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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,924	03/12/2001	Fu-Sheng Chen	06484.0070	1250

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EXAMINER
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NGUYEN, DANNY

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 04/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/802,924

Applicant(s)

CHEN, FU-SHENG

Examiner

Danny Nguyen

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statements filed 03-12-2001 has HTML in it. Examiner has considered, but the office will not print it on the front of the patent.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4-6, 9-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Drage et al. (USPN 4,790,258).

Regarding to claims 1, 6, 9, 10,13, Drage et al. disclose a chuck system for supporting a semiconductor wafer (see fig. 1 and 2) comprises a chuck platform (11) for supporting the semiconductor wafer, lift structure (shown in fig. 1) movably coupled to the platform to receive the wafer, including a lift base (14) and at least one lift pin (pin 23 shown in fig. 2) removably coupled to the base, the lift pin having two ends with a first end removably coupled to the base and the second end coupled for supporting the wafer during operation of the lift structure (see col. 2, lines 48-51), the lift structure (see fig. 1) has an external thread on the first end of the lift pin and a matching internal thread in a hole provided by the lift base (14) to removable couple the lift pin and the base.

Regarding to claims 2, 4, 5, 11, 12, Drage et al. disclose the first end of the lift pin is threaded and the base (14) having a threaded hole (see fig. 1) for receiving the first end of the lift pin, the lift structure comprises a plurality of pins (13) connected to the base (14), the lift pin is made of a conductive material (see col. 2, lines 52-53).

Regarding to claims 17, 18, Drage et al. disclose a method of maintaining a lift structure of a chuck wafer that supports a semiconductor wafer comprises providing a removable lift pin (23), removing the first pin to the lift base (col. 2, lines 48-52), mounting a second pin (13) to the lift base (14)(see fig. 1 and 2).

3. Claims 1-4, 9-11, 13, 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Tepman (USPN 5,951,775).

Regarding to claims 1, 10, Tepman discloses a chuck system for supporting a semiconductor wafer (see fig. 1 and 2) comprises a chuck platform (16) for supporting the semiconductor wafer, lift structure (see fig. 2) movably coupled to the platform to receive the wafer (14), including a lift base (shown in fig. 2) and at least one lift pin (30) removably coupled to the base, the lift pin having two ends with a first end removably coupled to the base and the second end coupled for supporting the wafer during operation of the lift structure, the lift structure has an external thread on the first end of the lift pin and a matching internal thread in a hole provided by the lift base to removable couple the lift pin and the base.

Regarding to claims 2, 4, 9, 11, Tepman discloses the first end of the lift pin (first pin 30) is threaded and the base having a threaded hole (see fig. 2) for receiving the

first end of the lift pin, the lift structure comprises a plurality of pins (plural pins 30) connected to the base.

Regarding to claim 3, 16, Tepman disclose the system comprises a bolt (shown in fig. 2), wherein the first end of the lift pin (first pin 30) is threaded and the bolt removably couples the lift pin with the base through an opening provided by the lift base.

Regarding to claims 6 and 13, Tepman discloses the chuck system is an electrostatic chuck system (fig. 2).

Regarding to claims 17, 18, Tepman discloses a method of maintaining a lift structure of a chuck wafer (fig. 2) that supports a semiconductor wafer (14) comprises providing a removable lift pin (first pin 30), removing the first pin to the lift base (by removing the bolt), mounting a second pin to the lift base (see fig. 2).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7, 8, 14, 15, are rejected under 35 U.S.C. 103(a) as being unpatentable over Drage et al. in view of Morita et al. (USPN 5,815,366). Drage et al. disclose all limitations of claims 1 and 10 except for having the lift pin connected to ground when the lift receives the wafer. Morita et al. disclose the lift pin connected to ground (ground circuit 30 shown in fig. 2). It would have been obvious to one having skill in the art to

modify the circuit of Drage et al. with a ground circuit ad taught by Morita et al. in order to discharge electrostatic on the wafer during lifting operation.

**Conclusion**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danny Nguyen whose telephone number is (703)-305-5988. The examiner can normally be reached on Mon to Fri 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (703)-308-3119. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9318 for regular communications and (703)-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.

DN

DN  
April 11, 2003

*Stephen W. Jackson*  
4-17-03

STEPHEN W. JACKSON  
PRIMARY EXAMINER